

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
)	CS Docket No. 97-80
Implementation of Section 304 of the)	
Telecommunications Act of 1996)	
)	
Commercial Availability of Navigation Devices)	
)	
Compatibility Between Cable Systems and)	PP Docket No. 00-67
Consumer Electronics Equipment)	
)	

To: The Commission

REPLY COMMENTS OF PUBLIC KNOWLEDGE AND CONSUMERS UNION

Public Knowledge and Consumers Union (“Consumer Groups”) hereby submit these reply comments in connection with the Commission’s *Further Notice of Proposed Rulemaking*, FCC No. 03-3 (released Jan. 10, 2003) (“*FNPRM*”) in the above-captioned proceeding.

I. INTRODUCTION

At their heart, the issues confronting the Commission here are simple. The Commission must set standards dictating what equipment may label itself “digital cable ready,” and the Commission must promote the development of standards for navigation devices that will result in a lively and evolving market for such devices. Yet the Memorandum of Understanding (“*MOU*”) submitted by the cable and consumer electronic industries would have the Commission:

- “pick a winner” as to copy-protection schemes;

- address a phantom threat of Internet redistribution of TV content;
- cut off “digital cable ready” products from accessing the Internet or using a cable modem;
- foreclose the use of the Uniform Serial Bus (“USB,” a standard interface on personal computers);
- administer a set of established “business models” for delivery of television content;
- put in place an approval mechanism for new business models; and
- set “encoding rules” for each business model.

This complicated, detailed regulatory scheme is all designed to prevent presumptively dishonest cable consumers from saving copies of TV content or giving a copy to a friend or family member. In addition, the Commission is being asked to constrain the functionality of navigation devices so tightly as to strangle any nascent market in such devices, except for those benighted vendors who might produce knockoff set-top box clones and compete on price against General Instruments and Motorola. Vendors of computers and other general-purpose digital devices will face immense difficulties entering the navigation-devices market if the *MOU* is adopted without significant modification.

Fortunately, the Commission is in a position to set things right. It should therefore act quickly with regard to the *FNPRM*, setting simple, functionally oriented “plug and play” standards that enable the consumer-electronics industry to go forward with new products, and that are open enough to allow variation in functionality and the development of new, paradigm-shifting product offerings.

To go forward quickly in this matter, however, requires that the Commission resist the parts of the *MOU* that conflate (a) business-model/copy-protection policies with (b) “plug and play” standards and the encouragement of a vital market in navigation devices.

This can be done, but it requires recognition that multi-purpose digital technologies both offer more flexibility and evolve more quickly than single- or dual-purpose consumer-electronics devices do. *To put the matter concretely: a tape recorder or a CD player or a VCR or a television set will have the same functionality in ten years as it does when it rolls out of the factory door today, but a general-purpose digital device can alter its functionality whenever new software is loaded onto it.* This is why the MOU's prescription of a particular implementation of a single protection technology is fundamentally misconceived – it assumes the market for delivery systems for TV content is essentially as static as it was in, say, 1980. Products like the TiVo digital-video recorder (DVR), however, have already challenged that static paradigm.¹

Properly, the Commission can set minimum hardware connectivity requirements (e.g., plain, “unprotected” Firewire, DVI, and USB ports) that are meant to be a “floor” for connectivity but not meant to be an exhaustive list of what can be used to connect devices. That would enable CE manufacturers to go forward with new interoperable products. If the Commission further wishes to embrace the administration of business models and of copy-protection schemes, it should do so in a separate proceeding, where the merits of different business models, different policy models and different copy-protection schemes could be discussed on their own and on the merits. The Commission should not attempt to piggyback these issues onto what should properly be rulemakings aimed at consumer-friendly labeling of “digital cable ready” products and at the broadest possible competition

¹ Even though the TiVo DVR shares some of the single-purpose nature of a consumer-electronics device, it differs from CE devices in that it is built from general-purpose computer hardware and software, it is tied to a particular kind of service, and it is upgradeable remotely via software. It also may be digitally networked to IT devices, such as Windows or Macintosh personal computers, to create a digital home network. See TiVo's Press Release about the “home media option,” “TiVo Home Media Option™ Now Available, Delivering The Benefits of Networked Home Entertainment,” at <http://www.tivo.com/5.3.1.1.asp?article=175>.

in the field of navigation devices.

We recognize that the *MOU* is the product of good-faith negotiations between the cable companies and the consumer-electronics companies, and that both parties attempted to accommodate reasonable consumer expectations in developing the multitude of complex policy decisions and compromises. But going forward quickly means keeping things simple, and the *MOU* is anything but simple. Therefore, the Commission should deal with the straightforward problems (*i.e.*, labeling, navigation-device markets and supervising the DFAST license) without embarking upon the treacherous terrain of architecting a narrow set of business models for making television content available to the general public.

II. THE *MOU*'S ATTEMPTS TO ACCOMMODATE INNOVATION ARE INADEQUATE.

It is clear from their filings and from the *MOU* itself that the cable and consumer-electronics companies have attempted to design a framework under which new, protected digital outputs can be approved. But the mechanism as presented in the *MOU* – approval by the studios, by CableLabs, or by the Commission itself – is far more bureaucratic than truly accommodating of innovation as it actually occurs in the rapidly evolving digital marketplace. There is no benefit to consumers, however, in slowing things down.

There is a better alternative sketched out in the Comments of Intel at 7:

“In this context, the approval of digital outputs is very important because it directly impacts the architecture of the home-network. While Intel is pleased to see that the DFAST License anticipates the approval of new content protection technologies in a reasonable and non-discriminatory manner, we support the development of functional criteria and self-certification that will take the guess-work out of technology approvals and open the door for many protected digital outputs. Intel believes that the more approved secure digital outputs there are, the greater the innovation and development in the market place there will be.”

The Consumer Groups agree with Intel's simple three-part prescription:

- **Functional requirements.** The Commission does best when it prescribes how relevant technologies should function rather than prescribing a particular technological and building policy around its features and limitations (as it would were it to adopt 5C or a particular implementation of 5C as a digital-output standard).
- **Self-certification.** Specifications should be published, and prospective manufacturers should be allowed to build to them without subjecting themselves either to approval by (potentially hostile) businesses, or by the (potentially slow-moving) Commission.
- **More digital outputs are better.** Rather than picking all the digital outputs that will be allowed, the Commission should simply set a "floor" of required outputs, and let the market freely innovate as to new outputs.

The Intel prescription should be adopted regardless of whether the Commission determines it must adopt encoding rules or the administration of business models. Even if the Commission were unwisely to adopt the cumbersome approach of the *MOU* as to approval and oversight of business models, it could still generate rules that focused on functional criteria that could be implemented in a broad range of digital technologies rather than on particular copy-protection technologies (or, worse, particular implementations of particular copy-protection technologies).

III. THE COMMISSION SHOULD NOT ADOPT ANY RULE THAT DISFAVORS THE USE OF THE "RETURN PATH" TO THE CABLE SYSTEM OR THAT DISFAVORS INTERNET CONNECTIVITY.

The Consumer Groups agree with several commenters² that any rule based on the *MOU* should clarify that information-technology (IT) devices should not be disfavored as navigation devices or as "digital cable ready" devices, and that neither the "return path" to the cable system nor potential Internet connectivity should result in a device's being

² See Comments of Intel; Comments of ATI Technologies, Inc., Dell Computer Corporation Hewlett-Packard Company, Intel Corporation, Microsoft Corporation and NEC Corporation; Comments of TiVo Inc.

excluded from either the navigation-device or “digital cable ready” categories. The Consumer Groups believe that Congress intended for greater use of computers and other digital devices as ways to access content and other services from cable systems; because all of these devices are potentially connectable to the Internet, they seem to be definitionally excluded from the DFAST license’s definition of “unidirectional products.”³ TiVo further notes that “[i]nnovative devices like the TiVo set-top are Internet-enabled, and may be able to provide enhanced functionality through access to Internet-based services using a cable modem.”⁴

The Consumer Groups believe that much of the reason for these definitions, and indeed for the decision of the parties to the *MOU* to focus on “unidirectional” products, derives from unfounded fear of Internet redistribution of digital-television content.⁵ We believe that this potential problem, even considered in the light most favorable to those who believe in it, is overstated. We further believe, however, that should significant Internet redistribution of digital-TV content become a real threat to the interests of copyright holders, it will be easier to adapt existing and future digital devices to prevent such redistribution if the Commission sets standards that are based on functional requirements rather than specific technologies and that are fundamentally open-ended.

At this point, it is worth pointing out again, as we did in our introduction, that digital devices are fundamentally reprogrammable. This means that the very devices that

³ DFAST License at 1.19.

⁴ TiVo Comments at 5.

⁵ We use “digital-TV content” or “digital-television” content to refer primarily to HDTV content (720p or above) and secondarily to all digitally originating and digitally broadcast content (SDTV/480p and above). Even at SDTV resolutions, non-lossy redistribution of non-degraded content is likely to remain impractical for some time to come. *See generally* Comments of Raffi Krikorian in Broadcast Flag Proceeding, FCC MB Doc. No. 02-230; Comments of Public Knowledge and Consumers Union in Broadcast Flag Proceeding, FCC MB Doc. No. 02-230.

are perceived as potential threats to copyright interests can also be adapted to become less threatening, should the Commission perceive such a threat to be actually looming.

Regardless of whether the Commission agrees with the Consumer Groups as to the nature of the purported threat of Internet redistribution of high-quality digital-TV content, it should be clear that there is a great deal of potential consumer benefit to be obtained by retaining Internet connectivity as an option for navigation devices and “digital cable ready” products. Such connectivity would mean more than simply the enabling of faster, better, and more comprehensive program listings (and other features) relating to cable content. It also would promote a range of ancillary features, including (for example) the ability to research online the facts behind a history special on PBS, and the ability to purchase clothing or other products used by actors in a TV dramas, simply by clicking on a link embedded in the content or otherwise presented along with the content. The potential for ancillary uses of this sort (which may supplement or even replace commercial advertising as a means of subsidizing the development of some programming) is limited only by the imagination.

IV. THE COMMISSION SHOULD NOT TAKE ON THE TASK OF APPROVING AND ADMINISTERING BUSINESS MODELS OR ENCODING RULES DESIGNED TO PRESERVE OR PROMOTE PARTICULAR BUSINESS MODELS.

Apart from the simple political fact that the Commission and Congress have for many years disfavored the creation of new, intrusive regulatory schemes, favoring minimal regulation and the operation of the market, the Consumer Groups maintain that there are good policy reasons for the Commission to tread lightly in this area. Specifically, we have seen the arrival of TiVo and other DVR products that already have begun to revolutionize

how citizens receive, view and otherwise use television content, generally in ways that favor those who produce and distribute television. The Consumer Groups believe that, had the *MOU*-proposed scheme of approval of new business models been in place a decade ago, consumers would far less likely have benefited from the development of DVRs, either as standalone devices or as adjuncts to the general-purpose personal computer. It seems unlikely that the studios would have approved the TiVo DVR, had they had the chance, nor does it seem likely that a small startup enterprise like TiVo would have been positioned either to seek (and win) CableLabs's approval in an era in which the set-top box market was a near-monopoly or to pursue speedy approval by the Commission of its plans for an unprecedented product.

The Consumer Groups recognize that the cable companies, by seeking Commission adoption of an encoding-rule scheme, were attempting both (a) to forestall the studios' use of licensing agreements to play the satellite and cable industries against each other for access to premium content⁶ and (b) to protect consumers from the studios' historical tendency to ratchet up content protections through licensing in ways that might restrict consumer uses of content in the future. These are respectable goals. But if the policy concerns that have driven the shape of the *MOU* are as serious as the cable companies believe they are,⁷ the Consumer Groups believe the proper approach to these concerns is to raise them in a separate proceeding.⁸ This proceeding, in order to have the salutary effect

⁶ The Consumer Groups have spoken with representatives of the cable companies as to this point, and we believe that the cable companies' characterization of the studios' strategies in this regard is essentially accurate.

⁷ The Consumer Groups are skeptical whether the studios would refuse to continue to license content to cable providers absent the kind of comprehensive content protection schemes the studios currently claim to require. Moreover, to the extent that some cable providers are owned or co-owned by content providers, the cable companies' claims as to this threat must be assumed to be at least potentially biased.

⁸ The Consumer Groups agree with the Reply Comments of Veridian that a negotiated rulemaking of the sort proposed by Veridian may be the proper avenue for developing a better understanding of the problems

it is hoped to have on the DTV transition and on the market for DTV-related consumer electronics, ought to be limited to basic, physical, minimum requirements, and ought not to foreclose or limit the development of new digital interfaces or new digital-protection technologies.⁹

V. IF THE COMMISSION DOES CHOOSE TO ADOPT ENCODING RULES, IT SHOULD REQUIRE THAT “BASIC TIER” CABLE SERVICES REMAIN UNENCRYPTED.

If the Commission decides to set-up a complicated set of encoding rules and an associated business-model approval-and-administration regulatory scheme, the Consumer Groups argue in the alternative that, for reasons discussed at length in the Comments of the Electronic Frontier Foundation, “basic tier” cable services should remain unencrypted, and should be freely copyable by consumers consistent with current consumer expectations, except to the extent that encryption or scrambling is required for protection from theft of cable services.¹⁰

The Consumer Groups maintain that innovation in the delivery of television content is a necessity both for the continuing existence of free television as we know it and for the economic benefits such television content delivery will have for equipment manufacturers, for the producers and distributors of TV content, and primarily, for consumers.

purportedly by the producers and distributors of digital content. Veridian Reply Comments at 10-12. We do not yet recognize, however, that these problems have yet manifested themselves, or soon will. We note that the Reply Comments of EFF also recommend dealing with the business-model/content-protection array of questions in a separate proceeding.

⁹ On this point the Consumer Groups agree with much of the discussion in Section II of the Comments of the Motion Picture Association of America, but note also that we disagree strongly with that section’s disapproval of analog outputs or its approval of “image constraint” (aka “down-resolution” or “downrezzing”) of content. *See* Comments of Public Knowledge and Consumers Union at 10. Analog outputs in particular are necessary to preserve backwards compatibility with the installed base of consumer-electronics and information-technology products.

¹⁰ Comments of EFF, FCC CS Doc. No. 97-80, PP Doc. No. 00-67.

VI. CONCLUSION

The Consumer Groups recognize the forces that impel the Commission to find a quick resolution to the cable-compatibility/navigation-device issues in this docket. It is precisely because we support the Commission in its efforts to resolve these questions quickly – because a speedy resolution will benefit consumers and promote the digital-television transition – that we recommend the uncoupling of the “simple” questions of “digital-cable-ready” labeling and basic hardware “plug-and-play” compatibility from the larger, more complicated, but analytically distinguishable questions of business-model approval and content protection. It possible for the Commission to act quickly, in a limited way, to set technology-neutral, functionally based standards that promote the DTV transition as to CE products and cable navigation devices, but only if the Commission keeps its “eyes on the prize” – informing and benefiting consumers and promoting the DTV transition. The Consumer Groups stand ready to help the Commission in this endeavor.

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